Water for the Cities: New York City and The Croton Aqueduct
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Introduction
Water Supply an International problem
Case study New York City
New York Giant City
World City and its Ambitions
Historical Struggles on the Path to Greatness
Water supply-the Central Roadblock
Resolution of the city's first water supply crises
Enabled New York to grow
Shaped its relationship to its surrounding communities
Conditioned patterns of later responses

Interpretive Frames
1. Tension between Culture & nature
   Fundamental battle
   Wilderness subdued
   Abundance
   Resources god's special gifts
   Cultural Anxiety
   Concerns of writers like Thoreau
   Hudson River School of painters–Romantics and nature

2. The geographical and resources base
   Limits to growth and physical expansion
   Concept of bio-regionalism
   Nature's boundaries
   The Croton Aqueduct and the question of limits
   Was it precedent setting?

3. Technology, the landscape and politics
   Building of the CRAQ and the technical knowledge of its day
   Transforming the City and the Westchester landscape
   Distribution Power: city-suburb
   Changing in daily life

4. Chapter in the History of urban development
   New York City case study
   Application to other cities
   Planners and city fathers
   Impulse to grow
   Class and entrepreneurial interests.
   Public health history and dynamic capitalism

   History of 19Century Cities
   Banking, insurance and water
   Competition and Growth

5. Public Health Crises
   The unhealthy city
   Polluted water supply
   Framing the issue
   New public health issues
   Remaking the City's Reputation

Result
Largest surface water supply in the U.S.
High quality water
World's best tasting

Public Perceptions
Invisibility
Habits of consumption
Source of our water
Availability on demand
Ignorance of value and history

How is this history instructive for the present.

History and development of the WV water supply

Growth of the City
Urbanism
Population growth

Post-war Port (War of 1812)
Navy yard, army base

1825 Erie Canal opened
Commercial supremacy

1857 The Great Fire

Mapping the Changes
Nature vs Culture
Streets v squares
New York as Entrepot
- Commercial/industrial growth
- Immigrants cheap labor
- Rates of immigration
- Unprecedented density
- Social and physical danger
- Backlash

The Overwhelmed City
- Growth outstripped institutional and resource base
- "The up and down city"

Fires
- Great Fires of 1776-1834-1835
- Insurance Companies and Panic 1837
- Water resources

Model in Philadelphia water works
- The model city
- Benjamin Latrobe's 1801 Schuylkill water supply
- Fairmont works 1822

Why was NYC so late?

History of NYC Water supply
- Early drinking water sources
- The Collect fresh water pond (Foley Square)
- Animals (Horses) & household garbage
- Privies & Pollution
- Polluted 1790s "shocking hole"
- The population outstripped the water base

Triggers for Action-Cholera and Fire
- 1832 Cholera Impact

NYCrinris - What's at Stake?
- NYC Common Council pleads to Albany - water commission
- Croton and river

Planning the Aqueduct
- NYC's lack of planning
- Chambers St. reservoir 130,000 galls
- 1796 and profits

Construction Plan
- John Jervis
- Major Douglas and John Jervis 1835
- The Engineer-RR, Bridges, Canals

Opening Celebration Oct 1842
- Water available
- Public baths
- Guilfordon

Impact
- Public baths
- Water available
- Sewers and sanitary engineers
- Street clean-ups

City's Reputation
- Analogy with London
- Commercial dominance
- Unfettered growth
- Antipathy of the City

Context:
- Warning preparations
- Street world - garbage - dogs and pigs
- "Street world" - business garbage - privies
- Privies - garbage privatized
- Manure and privies
- River at sewer

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RECONCILIATION AND MEANING

Progress and nature

Historical association—continuum

July 4, 1842: The public celebrates

Popular attraction

Architectural style

Technology and historical association

"Croton Ode for celebration"

Charles King, "Memoirs of Construction" (1843).

American superiority

Free labor

Conspicuous consumption

God’s gift.

Fayette Power Engine:

She left a footprint in the appreciation of nature

Public recreation

Historical association with Spoleto

Dam technology—sublime

High Bridge

The Jet Fountain at the Harlem River

Public recreation

Bucolic

Historical association with Spoleto

Dam technology—sublime

High Bridge

Surface Supply system

Protection & Safety

Watershed & Reservoirs

Watershed, Function

Size of city a function of size of watershed

Croton

Water treatment

Wastewater treatment plants in the watershed

Sewage treatment plants

Water Quality

Consumption

Costly filtration

Catskill

Water Quality

Aquifer

Inflow

Protection and Safety

Conservation and Filtration

Cannonsville problematic

Dairy farms

Algae Bloom sumer months

Phosphorus run off

Beginnings of the modern age

Conservation and Filtration

Summary

Great technical achievement

Great city

The reach of the city and the condition of dependency

Confronting nature

Dispelling anxieties

Building confidence to live in harmony with nature.